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METHODS OF RISK ASSESSMENT AND DECISION-MAKING IN INVESTMENT PROJECTS AMID ECONOMIC INSTABILITY

MÉTODOS DE AVALIAÇÃO DE RISCO E TOMADA DE DECISÕES EM PROJETOS DE INVESTIMENTO EM MEIO À INSTABILIDADE ECONÔMICA

MÉTODOS DE EVALUACIÓN DE RIESGOS Y TOMA DE DECISIONES EN PROYECTOS DE INVERSIÓN EN MEDIO DE LA INESTABILIDAD ECONÓMICA

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Abstract: The paper presents an attempt to study the role of investment risk management. The primary goal of the study is to reveal patterns that define the features of risk assessment in business as a fundamental element that contributes to the company's economic security, as well as to conduct a comparative analysis of risk assessment and management methods. The methods employed in the study are the methods of cognition, retrospective and documentary analysis, as well as synthesis, generalization, and systematization. The authors conclude that modern economic analysis uses various methods of risk management. The most effective ways to reduce risk in the unstable economic and political situation in Russia are the method of scenarios and the method of hierarchy analysis, which are used to perform calculations to assess the attractiveness of investment projects.

Keywords: model, investment, risk, risk management.

Resumo: O artigo apresenta uma tentativa de estudar o papel da gestão de risco de investimento. O objetivo principal do estudo é revelar os padrões que definem as características da avaliação de risco nos negócios como elemento fundamental que contribui para a segurança econômica da empresa, bem como realizar uma análise comparativa dos métodos de avaliação e gestão de risco. Os métodos empregados no estudo são os métodos de cognição, análise retrospectiva e documental, bem como síntese, generalização e sistematização. Os autores concluem que a análise econômica moderna usa vários métodos de gerenciamento de risco. As formas mais eficazes de reduzir o risco na situação econômica e política instável na Rússia são o método de cenários e o método de análise hierárquica, que são usados para realizar cálculos para avaliar a atratividade de projetos de investimento.

Palavras-chave: modelo, investimento, risco, gestão de risco.

Resumen: El artículo presenta un intento de estudiar el papel de la gestión del riesgo de inversión. El objetivo principal del estudio es revelar los estándares que definen las características de la evaluación de riesgos en los negocios como elemento fundamental que contribuye a la seguridad económica de la empresa, así como realizar un análisis comparativo de los métodos de evaluación y gestión de riesgos. Los métodos utilizados en el estudio son los métodos de cognición, análisis retrospectivo y documental, así como la síntesis, la generalización y la sistematización. Los autores concluyen que el análisis económico moderno utiliza varios métodos de gestión de riesgos. Las formas más efectivas de reducir el riesgo en la inestable situación económica y política en Rusia son el método de escenarios y el método de análisis jerárquico, que se utilizan para realizar cálculos para evaluar el atractivo de los proyectos de inversión.

Palabras clave: modelo, inversión, riesgo, gestión de riesgos.

1. INTRODUCTION

The issues of investment decision-making and models for assessing investment risk are currently pressing economic issues. The introduction of modern digital technologies entails not only the transition from the traditional economy to the digital economy, but also changes for financial markets, which have to adapt to digitalization. This fully translates into the transformation of traditional financial assets into digital financial assets, and economic subjects purchase them to support their positions on the stock exchange (Bstudy, 2021).

Investment risks are inextricably linked to the concept of investment activity, which can be defined as "the investment of funds, as well as other assets, in projects that could potentially lead to an increase in capital, and, accordingly, bring profit" (Meskon et al., 2020; Ryzhova & Strachkova, 2018; Sirota et al., 2018). Importantly, this activity cannot function without risky assets.

Virtually all organizations are engaged in investment activity. It contributes to the growth of production, as well as the introduction of new activities for the company. These factors have a direct impact on business expansion, as well as on the growth of the degree of influence in the market.

The purpose of this paper is to examine the order of investment risk-taking, the valuation model, and trends in the instruments through which businesses can make investment decisions.

In accordance with the research, the following objectives are set for the study:

- to investigate the adoption of investment decisions;
- to study the model of investment risk assessment.

2. LITERATURE REVIEW

Making investment decisions

Traditional financial theories are based on the assumption that economic agents, including households and private investors, behave rationally.

In turn, behavioral finance theories acknowledge that economic agents behave irrationally, but ignore the influence of emotions on the investment decision-making process.

A new understanding of the causes and motives of the behavior of individual and institutional investors is proposed as part of the emotional finance theory proposed by Taffler and Tuckett (2008) in their study "Phantastic Objects and the Financial Market's Sense of Reality: A Psychoanalytic Contribution to the Understanding of Stock Market Instability".

It is important to note that decision-making is influenced not only by conscious emotions but also by the unconscious psyche. Many researchers have attempted to model investor behavior to predict market behavior.

Refining the existing models calls for a way to incorporate the influence of the unconscious into them.

The subjective reality in which financial market participants make decisions and act does not coincide with the objective reality with which traditional financial concepts interact. When investing money in an asset, an investor experiences contradictory feelings: on the one hand, they look forward to future profits, while on the other hand, they worry about possible losses. Even if the investor does not realize it, there is an emotional attachment to the asset. Depending on how things develop, this attachment eventually results in joy or pain.

The founders of emotional finance introduce the term "phantastic objects" as applied to the investment market. Phantastic objects are assets (asset classes) that satisfy an unconscious human need "to have exactly what they want, and exactly when they want it".

By acquiring such an asset, the investor acquires an unconscious sense of omnipotence. The idea of phantastic objects emerged as a way to explain the dot-com crisis. The dot-com stocks became a phantastic object for many investors, which impacted the market as a whole. However, not only financial bubbles, but any asset can become a phantastic object for its investor and evoke intense emotions.

When predicting the future performance of such an asset, the investor overlooks negative scenarios and confuses wishful thinking with reality unknowingly.

With respect to interactions with phantastic objects, the rational behavior of the investor can be described as an "integrated state of mind".

This state of mind implies the recognition of conflicting feelings, the acknowledgment of one's uncertainty, and the uncertainty of the real world. In this sense, the irrational is the

"divided state of mind", in which people unconsciously protect themselves from pain and refuse to acknowledge that their idealized assets have taken a toll.

To cope with feelings of helplessness, pathological gamblers create the illusion of control, both in financial markets and in gambling. When reality takes over, phantastic objects evoke an irrational hatred. It is safe to say that this moment will come for any asset that has become a phantastic object for many market participants. However, there are currently no tools to pinpoint the date of the breaking point in advance.

It is usually impossible to predict the point at which the growing level of anxiety will become impossible to contain, and reality will eventually overpower the extremely satisfying fantasy of wish fulfillment associated with the possession of a phantastic object.

Emotional finance sees markets as large groups with unconscious group dynamics. Within a group of market participants, individual investors interact with each other through various channels.

Group dynamics can be explored through psychoanalytic instruments. Risk management in emotional finance is based on distinguishing two types of risk: conventional (idealized) measures of risk based on projections of the future based on probabilities, and real risk based on investors' fears of making poor decisions (Algin, 1991; Ivliev, 2013; Khrustalev & Slavianov, 2011).

It can be argued that the calculation of statistical measures of risk in the concept of emotional finance is seen as a way of pseudo-protection, a way of ignoring real risk. This protection is needed for investors to maintain confidence in the market, otherwise, investments will become impossible, leading to stagnation in the economy (Iashin et al., 2019, p. 34).

For a financial market to function, investors must be able to act in the face of uncertainty. Investors must trust the market, the issuer, and the analyst, which introduces vulnerability, but helps them cope with anxiety. By overcoming doubt, the investor can act. They connect the present and the future, thereby creating the desired future results (Avdiiskii, 2012; Porter, 2016; Strachkova, 2015, 2019; Vlasov, 2013).

3. METHODS

To achieve the established research goal, the study employs general scientific methods of cognition and synthesis, including the principle of objectivity and systematicity, as well as the methods of comparative analysis and the comparative approach.

An analysis of the scientific literature, a comparative analysis of international approaches to the problem, and a summarization of scientists' views on the issues under study have been conducted to demonstrate the relevance of the problem. To establish and address the research problem, we used various information sources, such as monographs and articles, including those published in journals indexed by Scopus and Web of Science, that contain provisions on the problem of reducing economic risks in an unstable economic and political situation.

4. RESULTS AND DISCUSSION

Investment risk assessment model

It is established that through group dynamics in markets, emotional finance can explain the anomaly of impulse.

The more the price of a stock has risen, the more confidence an investor has in it, because it means that other bidders have recognized it as worthy of attention. The reluctance of many private investors to build long-term retirement strategies also finds an explanation in the concept of emotional finance. For many people, retirement is associated with ideas of weakness, ill health, and death.

These thoughts are forced out of the mind, and the associated investment decisions remain unaccepted. Emotional finance views the investment fund industry through a contradiction. On the one hand, empirical research shows that actively managed funds on average lose out to benchmarks. On the other hand, clients expect managers to deliver consistent returns.

What helps fund managers cope with this contradiction is the ability to plausibly explain why decisions worked (manager's wisdom) or did not work (negative external events). This

gives managers and clients an illusion of control that supports their ability to act. Studies have shown that persuasive storytelling has a greater impact on investment fund clients than financial performance. However, it is generally not acknowledged that the investment industry forms unrealistic expectations of its clients (Gitman & Joehnk, 2004; Helpiks, 2022; Iashchenko & Dodov, 2019; Tukkel et al., 2020).

The industry relies on the idea that some managers can consistently deliver results above average. On the one hand, this forced managers to search for phantastic objects with increased profitability and low risk that are unnoticeable to other participants in the market. On the other hand, such managers themselves become phantastic objects to their clients, analysts, and mass media. The market puts managers on a task that they are objectively unable to perform, while simultaneously neglecting their contribution to meeting the real emotional needs of customers (Kiseleva & Simonovich, 2016a, p. 24).

Thus, one of the key areas of emotional finance has been the study of the mechanism of financial crises – the Chinese financial bubble, the dot-com crisis, and the mortgage crisis.

In particular, R. Taffler gives the following description of the illusions of American investors with respect to the CDR instrument, which promoted the 2008 economic crisis: "with apparent magical sleight of hand, the omnipotent new masters of the universe, scientists with PhDs in mathematics and nuclear physics, have managed to defeat risk and unpredictability forever with their complex and opaque derivative products".

The main contribution of the concept of emotional finance to the study of investment decision-making based on the image of the desired future is that the study of the impact of the unconscious on investors' mental reality helps to improve approaches to asset valuation, investment market acceptance, and market forecasting (Kiseleva & Simonovich, 2013, p. 55).

Today, there are many methods for assessing investment projects, which provide answers to the main questions asked by the investor:

- Is it worthwhile to invest the money?

- Which project is preferable if there are several options to choose from?

However, in the evaluation of investment projects, there are several problems associated with the complexity of analyzing the expected investment and the potential rate of return.

First of all, the appraiser must determine the consistency of the expected results with the investor's goals not only in terms of returns but also in terms of the period of return (Strachkova & Feoktistova, 2016).

Therefore, to make the right decision, complete information about the nature of cost recovery and the correspondence of the level of recoverable profit to the level of possible risks is necessary.

For this purpose, various types and methods of investment project evaluation are used.

Among them are:

• the simple (statistical) method;

• complex (dynamic, discounted, financial) methods (Iashchenko & Dodov, 2019).

The formula for calculating the present value is:

$$PV = \sum_{t=1}^{T} \frac{D_t}{(1 + r_t)^{t-1}} \quad (1)$$

where T – forecast period; D_t – the projected income stream from the implementation of the investment project in year *t*;

r_t – the discount rate applied to the projected income in year t, in fractions.

The formula for determining the net present value is as follows:

$$NPV = \sum_{t=1}^{T} \frac{D_I}{(1 + r_t)^{t-1}} - \sum_{t=1}^{T} \frac{I_t}{(1 + r_I)^{t-1}} \quad (2)$$

where I_t – capital costs for the implementation of the investment project in year *t*.

In addition to calculating the net present value the following indicators are identified to estimate the effectiveness of the investment project:

- discounted payback; profitability ratio; internal rate of return:

$$DPP = \frac{\sum_{t=1}^{T} \frac{I_t}{(1+r_t)^{t-1}}}{\sum_{t=1}^{T} \frac{D_t}{(1+r_t)^{t-1}}} \quad (3)$$

$$PI = \frac{\sum_{t=1}^{T} \frac{D_t}{(1+r_t)^{t-1}}}{\sum_{t=1}^{T} \frac{I_t}{(1+r_t)^{t-1}}} \quad (4)$$

$$\sum_{t=1}^{T} \frac{D_t}{(1+IRR)^{t-1}} - \sum_{t=1}^{T} \frac{I_t}{(1+IRR)^{t-1}} = 0 \quad (5)$$

Thus, the evaluation of investment and other projects is indispensable to determining the feasibility of investment (Kiseleva & Simonovich, 2016b, p. 48), minimizing potential risks, and choosing a business project with maximum investment attractiveness and profitability (Bogoviz et al., 2019; Kosov et al., 2016).

5. CONCLUSION

The uncertainty of the conditions surrounding the implementation of an investment project is not a given. As the project progresses, participants receive additional information about the conditions of its realization, and the previous uncertainty is lifted.

Summarizing the results of the examination of the new tools for attracting infrastructure investments in the development of regions in the context of their practical application, we can delimit the problem field of assumptions in understanding the causes of the so-called "cautious demand".

The reciprocal mechanism of several support measures, the imperative of meeting the selection criteria, the need to accelerate the formation of special institutional frameworks, and the change of management content inevitably causes organizational difficulties in the field.

Meanwhile, the tools of the infrastructure menu, acting among the priority stabilization measures, launch medium- and long-term transformations aimed at overcoming the accumulated and newly emerging structural problems.

These instruments complement the arsenal of tools of regional investment policy, actualize its development, and substantially fill the regional investment standard of a new generation.

In this, the following two types of methods can be used:

- Qualitative risk assessment methods;

- Quantitative risk assessment methods.

Thereby, the development and implementation of the organization's investment strategy provide reasonable management decisions in the field of financial management and make it possible to objectively assess the internal and external environment of entrepreneurship, analyze risks, and take measures to minimize them.

Ultimately, the above ensures the growth of the organization's value and its financial success in the long term.

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